REMARKS

This application has been reviewed in light of the Office Action dated July 28, 2004. Claims 86, 87, 92, 96, 97, 104 and 108-110 are presented for examination, of which Claims 86 and 97 are in independent form. Claims 88-91, 93-95, 98-103, and 105-107 have been cancelled without prejudice or disclaimer of subject matter, and will not be mentioned further, and Claims 108-110 have been added to provide Applicants with a more complete scope of protection. Claims 86, 87, 92, 96, 97 and 104 have been amended to define still more clearly what Applicants regard as their invention. Favorable reconsideration is requested.

Initially, the Examiner's request for submission of a copy of previously cited co-pending Application No. 09/345,969 is noted. Applicants respectfully advise that that application is now available in electronic form on the private PAIR system, and therefore presume that it is available to the Examiner in electronic form. If the Examiner nonetheless still wishes Applicants to submit a hard copy, they will gladly do so on request.

In the outstanding Office Action, Claims 86, 87 and 92 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,584,534 (Kobayashi). Claim 97 was rejected under 35 U.S.C. § 103(a) as being obvious from *Kobayashi*, and Claims 96 and 104 were rejected under Section 103(a) as being obvious from *Kobayashi* in view of U.S. Patent 6,480,923 (Moertl et al.).

Independent Claim 86 is directed to a method of data packet transmission from a first network to a second network via a communication device interconnecting the first and second networks, the first network being a communication bus transporting data packets in isochronous and asynchronous modes, the second network being a packet-switching network

transporting data packets in connected and non-connected modes. In method of Claim 86, internal resources adapted to a receiving mode in which data packets are received from the first network are allocated, and data packets are transmitted to the second network through the internal allocated resources in a mode associated with the receiving mode by using the reserved resources. According to Claim 86, in a case in which the isochronous mode is associated with the connected mode, the allocating step is performed before the communication device receives data packets from the first network, and in a case in which the asynchronous mode is associated with the non-connected mode, the allocating step is performed after the communication device receives data packets from the first network.[1]

Kobayashi relates to a communication apparatus provided with synchronous transfer function and asynchronous transfer function. Figures 2A and 2B of that patent illustrate an example of a configuration of a communication system composed of digital devices (201 and 202 in Figure 2A). While that illustrated system is one in hwich the present invention could be applied, that patent does not teach or suggest the present invention.

Each device in the illustrated system of *Kobayashi* comprises a 1394 interface unit 205 and two internal communication buses 208 and 209, the data bus 208 carrying data that has to be processed in continuous manner (isochronous data), such as image data or audio data, while the system bus 209 carries, when necessitated, controlled command (asynchronous data)

---

[1] It is noted that in dependent Claim 87, a previous step of reserving resources on the second network has been recited. The term "reserving" has been used instead of "allocating" to avoid any confusion between the resources reserved during the two steps.

for controlling the process units provided in each device (column 5, lines 3 to 16). As depicted in Figures 2A or 2B, two digital devices 201 and 202 are connected together through a communication cable 207, thereby illustrating an example of a configuration of a network.

Figure 6 depicts in more detail the 1394 interface unit 205 in each digital device of Figures 2A and 2B which can communicate through the communication cable 207 with outside devices. On the other hand, the Interface unit 205 in Figure 6 also communicates with several units within the digital device, either through the data bus 208 for isochronous data packets or system bus 209 for asynchronous data packets.

The communication between the two digital devices (201 and 202 in Figure 2A) is performed according to the IEEE 1394 standard under which the transmission of isochronous packets needs some resources to be reserved in advance (a communication band for transferring the isochronous packet in each communication cycle and a channel number assigned to such communication band; col. 7, lines 13-17).

After this reservation has been made, the isochronous packet containing the channel number is transmitted to the communication band.

With reference to Figure 6, it is also explained at col. 8, lines 7-17, that a transmitter unit 602 transmits a packet, packetized according to the isochronous or asynchronous transfer mode, in a predetermined communication band. The isochronous (asynchronous) packet is generated in an isochronous (asynchronous) transaction process unit 609 (611), then temporarily stored in an isochronous (asynchronous) transmission packet memory 605 (607) and supplied to a transmitter unit 602.

On the receiving side, a receiver unit 603 sends a packet to a transaction

discrimination unit 604 which determines whether the packet is transferred in the isochronous transfer mode or in the asynchronous transfer mode and, according to the result of this determination, either stored it in an isochronous reception packet memory 606 or in an asynchronous reception packet memory 608.

As at col. 8, lines 36-44, the isochronous (asynchronous) packets stored in the isochronous (asynchronous) reception packet memory 606 (608) are supplied in succession to an isochronous (asynchronous) transaction process unit 609 (611) and are subjected to a transaction process matching each packet.

Each isochronous and asynchronous transaction process unit 609 and 611 is respectively connected through an internal interface unit 612 and 612 to the data bus 208 and system bus 209 mentioned above.

Thus, the interface unit 205 comprises isochronous and asynchronous transmission and reception data packet memories.

The Office Action asserts that *Kobayashi* teaches a "method of data packet transmission using device 205 (in 201 or 202) comprising a first network 202 (see figure 2A) which is bus 208 (col 5, lines 5+) connected to a second packet switching network (see col 7, lines 13+ where a packet switching function is described, and note the use of the word 'selects' in line 19) through the use of cable 207".

Applicants do not agree that the digital device 201 or 202 in Figure 2A corresponds, even arguably, to a first network within the recitations of Claim 86. As a matter of fact, Applicants consider that Figure 2A and 2B each illustrate a configuration of two digital nodes connected together through a communication cable and thus forming all together a

network.

Further, there is neither disclosure of a second network which is a packet switching network nor of a communication device interconnecting the network depicted in Figure 2A with such a second packet switching network.

Even if it were accepted for argument's sake that *Kobayashi* disclosed a communication device interconnecting two networks, such a device being the IEEE 1394 interface unit 205 connecting, on the one hand, a first network comprising the buses 208 and 209 and, on the other hand, through the communication cable 207 another digital device which could be seen as a second network, nevertheless that second network is not a packet switching network, as recited in Claim 86.

Further, the data packet memories 605, 606, 607 and 608 in the interface unit 205 in Figure 6 are dedicated either to transmission or reception of isochronous or transmission or reception of asynchronous data packets. However, there is no association of the data packet memory to the resources of the second network, for example a FIFO associated to a channel number.

It is to be noted that, according to this document, the different memories used in the interface unit 205 are allocated in the same manner in advance in order to store data packets to come, whatever the transfer mode of these packets. As a matter of fact, the memories 605 and 606 are allocated with the internal interface 205 for data packets to be transferred in the isochronous transfer mode (and memories 607 and 608, for the asynchronous transfer mode) ahead of the reception of data packets.

In the method of Claim 86, the memory allocation for isochronous data packets

is performed before the reception of data packets. This can be achieved, for example, by the isochronous data packets arriving in a reception memory being immediately transferred to a transmission memory which is associated with reserved resources of the second network.

On the other hand, the allocation of memory for asynchronous data packets is performed only after the reception of the data packets. For example, one can adopt an arrangement in which the asynchronous packets received in a reception memory are transferred to another internal memory (RAM) before being transmitted to the second network via a transmission memory.

Neither of these features is believed to be taught or suggested by anything in *Kobayashi*. For these reasons, it is believed to be clear that independent Claim 86 is allowable over *Kobayashi*.

Independent Claim 97 is a device claim corresponding to method Claim 86, and is believed to be allowable over *Kobayashi* for at least the reasons presented above in connection with Claim 86.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

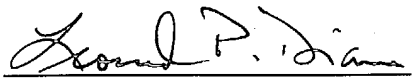
The other claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the

invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



Leonard P. Diana
Attorney for Applicants
Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

NY_MAIN 466708v1